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A MANUAL OF MEDICINE.

A Manual of Medicine. Edited by W. H. Allchin, M.D., F.R.C.P., F.R.S. Edin. Vol. i. Pp. viii + 442. Plates 2; and Vol. ii. Pp. viii + 380. Plates 2. (London: Macmillan and Co., Ltd., 1900.) 7s. 6d. net each.

THE work before us is to consist of five volumes, and will thus eventually cover some 2000 pages; the term manual, therefore, by which it is designated, applies rather to each individual volume than to the whole work. It is essentially a system of medicine. It can be seen at a glance that the book is of an essentially different type from Allbutt's system, recently completed. It deals much more succinctly with the respective subjects, and contains no bibliographies. We assume from this—there is no preface—that the work is intended not so much for a book of reference as a text-book for students, and as a handy reference book for practitioners. In the space at our disposal it is impossible to consider at all fully the two volumes before us, and nothing remains but to take a few of the most important monographs as types.

Vol. i. begins with an introduction by the editor, in which he discusses the bases of our conception of disease and the classification of diseases. He concludes by adopting the orthodox classification, viz. local, or diseases of individual organs, and general, or those diseases in which the entire body is concerned and no preponderance of symptoms in one region occurs. It is with this latter class of diseases that both the volumes before us are concerned. The general diseases are again divided into those of extrinsic and intrinsic origin; the former including abnormal states caused by atmospheric influences, parasites, vegetable and animal, and poisons introduced into the body as such; the latter comprising primary perversions of general nutrition and diseases of the blood.

The infections are treated by Dr. Sims Woodhead. The article includes the bacteriology of the subject, in so far as its essentials are concerned, and bacteriological chemistry, a consideration of toxins, anti-toxins, immunity and, finally, a classification of the infective diseases met with in man, arranged according to their cause. The same author writes upon sapræmia, septicæmia and pyæmia. Dr. Hale White communicates a succinct article upon fever. He discusses the factors at work in the production of fever which differ from the physiological standpoint, and enters at some length into the parts played by increase of heat production and diminution of heat loss. According to him fever cannot, from the standpoint of its physiological cause, be regarded as an entity, the method of its production varying with the cause. The author concludes by indicating the methods which should be employed to reduce fever. Dr. Cayley contributes a full clinical monograph upon typhoid fever. The article is very carefully written, and, considering the space it covers (twenty odd pages), is very complete. It is interesting to note that the author considers "the evidence for the preventive action of the typhoid vaccine much stronger than that for the curative action of the serum,"

and recommends its trial "during epidemics and in persons, like nurses, who are especially exposed to infection."

Plague and cholera are dealt with by Dr. Cantlie. The author gives the results of Haffkine's inoculations in both these diseases. The articles upon dysentery, leprosy, malaria and several other tropical diseases are also written by Dr. Cantlie. The chapter on diphtheria is by Dr. Foord Caiger, and includes a most instructive table compiled from the total admissions into the Metropolitan Asylums Board hospitals of patients suffering from this disease. The table deals with a total of 25,000 cases, the ages of which vary from one year to sixty, and shows that while the average mortality of the whole is 24·7 per cent., the mortality in children between one and two years old is 50·2 per cent. The satisfactory results of the treatment of diphtheria by anti-toxic serum are evidenced by the dictum of the author "that a dose of from 2000 to 8000 units of anti-toxin should be given at the earliest moment in every case when the patient is a child." The articles on Rôtheln, measles, scarlet fever and chicken-pox are from the pen of the same author.

Dr. Monckton Copeman supplies two monographs, upon small-pox and vaccinia respectively. In the article on small-pox reference is made to the work of Mr. Power concerning small-pox hospitals acting as a source of infection through the small-pox contagion being carried from them for a certain distance through the air. The importance of this fact cannot be over-estimated, and it is to be hoped that definite results, quantitative with regard to distance, will be obtained in this regard for other infectious diseases. The article on vaccinia includes extracts from the *Report of the Royal Commission on Vaccination (1898)*, and also a consideration of the technique of vaccination.

In vol. ii. general diseases are continued. Dr. T. W. Shaw and Dr. James Cantlie contribute articles upon the diseases caused by parasites. Dr. Poore, conjointly with the editor, writes upon diseases determined by poisons introduced into the body as such—alcohol, morphine, cocaine, phosphorus and the ordinary metallic poisons being dealt with. Dr. Lazarus-Barlow contributes a general article upon inflammation and its sequels, and the editor one upon malignant disease. The possible parasitic origin of malignant growths is discussed shortly but adequately, and the references to the chief of the many exhaustive monographs upon this subject are given, a method, it may be noted in passing, which might have been advantageously adopted more frequently throughout the book. A short but interesting essay upon rickets is contributed by Dr. Coutts. The ætiology of this disease is only very shortly discussed; but it is instructive to note that the author directly contradicts the assertion that rickets never occurs in children fed entirely on mothers' milk. It is of the greatest possible importance to the public health to be quite clear upon this subject; the universality of rickets and the profound extent to which it affects the subsequent growth and activity of the various organs of the body is probably unsurpassed by any other morbid agency. Two articles upon diabetes mellitus and insipidus, respectively, are written by Dr. Bertrand Dawson. The article on gout is by Dr. Lud. In writing a short article presumably for students one

must obviously be didactic. This method, however, has its limits; in this case we think these limits have been somewhat exceeded. The student, or even the practitioner, who does not supplement the knowledge of gout he has obtained from this source by some further reading will not, we are afraid, be in possession of the whole truth concerning this disease.

The remainder of the book is devoted to the diseases of the blood, the section being introduced by a chapter upon the blood under normal conditions, by Dr. Louis Jenner. This chapter will be found exceedingly useful to those interested in this subject; it is concise and up-to-date, and deals with the more generally employed technique. The diseases of the blood themselves are dealt with by Dr. Sidney Coupland.

In the case of the work before us, the reviewer finds himself in rather an anomalous position in that the editor has written no preface, so that it is difficult to know by what standard the book should be judged. From a careful perusal of it we should place it mid-way between a book of reference and an ordinary text-book of medicine. Had it contained fuller references to the literature it might almost have ranked as a reference-book; as it is, it will no doubt fill a very useful place, which it thoroughly deserves to do, in the library of the advanced medical student and the practitioner.

A NEW CLASSIFICATION OF THE REPTILES.

Beitrag zur Systematik und Genealogie der Reptilien.

By Prof. Max Fürbringer. Pp. 91. (Jena: Fischer, 1900.) Price Mk. 2.50.

IN the year 1873 Prof. Fürbringer, who has quite recently succeeded his illustrious master in the chair of comparative anatomy at Heidelberg, commenced to publish a series of contributions to the morphology of the pectoral girdle of reptiles, with special reference to the myology, the fourth and concluding part of which has now appeared. This highly elaborate piece of work is supplemented by a chapter entitled "*Beitrag zur Systematik und Genealogie der Reptilien*," in which the author sets forth his views on the phylogenetic arrangement of the class Reptilia.

As regards the origin of reptiles, the numerous fossil remains with which we are already acquainted seem to indicate so complete a passage from the Stegocephalous Batrachians, that the question at issue has lately been where to draw the dividing line between the two classes, an uncertainty which is further emphasised by the fact that the Microsauria, such as *Hylonomus* and *Petrobates*, of Carboniferous age, placed by most authorities among the Stegocephala, are included in the Reptilia by Prof. Fürbringer. From a knowledge of these connecting forms the conclusion must, it seems, follow that the ancestors of the Reptilia proper, themselves probably derived from Crossopterygian Fishes, as believed by Cope, Baur, and many other modern zoologists, possessed a skull with numerous membrane bones roofing over the temporal and occipital regions and with an immovable quadrate, that they belonged, in fact, to the type designated by Cope as monimostylic. In the process of evolution, in the series known as the Squamata (lizards

and snakes), the predominant modern reptilian type, the number of membrane bones having been reduced and the temple left more and more unprotected, the quadrate became free and more or less movably articulated to the squamosal and supratemporal (streptostylic skull of Cope). The direction of the line of evolution in this instance, running as it does concurrently with the reduction and disappearance of the limbs, seems clear enough, and it is further supported by geological data, all early Reptiles and Batrachians being monimostylic without a known exception, whilst the streptostylic types appear first in the Jurassic as Lacertilia, to be followed by Snakes in the Eocene.

These conclusions are, however, set aside by Prof. Fürbringer. For him, the streptostylic condition is the primitive one, and, from the partial homology which he believes to have established between the spheno-pterygo-quadrate muscle of the Lacertilia and the *tensor veli maxillae superioris* of Selachians, he is led to look upon the condition exhibited by Geckos and Monitors as nearer the original one than that known in *Sphenodon*, in which the said muscle is much reduced. From this sole consideration, and by the purely gratuitous assumption that some early Rhynchocephalians, such as *Kadaliosaurus*, and Microsaurians may eventually prove to have been streptostylic, the author thinks himself justified in holding that the ancestral types from which the Lacertilians have been derived cannot be sought for among either the Stegocephalians or the Rhynchocephalians with the cranial structure of which we are at present acquainted, but that they will be found to be connected with some primitive hypothetical Amphibian type in which the quadrate was movably articulated with the skull, as in the lowest form of living Selachians.

"That such primitive streptostylic Amphibians have once existed, is rendered probable by the facts ascertained in the ontogeny of the living Amphibians. Probably streptostylic became converted into monimostylic as, in the course of evolution, their originally superficial apparatus of dermal bones became more and more intimately connected with the quadrate, the mobility of which consequently lessened and finally completely ceased."

This reasoning, by which, on the ground of the imperfections of the geological record, chronological indications are absolutely ignored, is not likely to meet with general favour. After the multitude of well-preserved Carboniferous and Permian "Eotetrapoda" which have lately been discovered and described by Credner, Fritsch and others, it will be difficult to accept the author's teaching that we know practically nothing of the progenitors of existing reptiles, and that these must be connected through a series of hypothetical Proamphibia or Protetrapoda with equally hypothetical Selachian-like animals.

As a consequence of the above assumption, the new classification differs fundamentally from those hitherto based on phylogenetic considerations, in this, that the Streptostylia s. Squamata, with the two orders Lacertilia and Ophidia, are placed at the base of the series. The Rhynchocephalia, Acrosauria, Microsauria and Ichthyopterygia are associated with them in a subclass Tocosauria. A second subclass, Theromorpha s. Theromora, includes the Dicynodonts, Anomodonts and Pariasaurians; a third, Synaptosauria, the Mesosaurians, Sauropterygians